

The background of the slide is a photograph of Tiehm's buckwheat (Eriogonum fasciculatum) growing in its natural habitat. The plants are small, with numerous tiny, pale yellow flowers on thin green stems, scattered across a rocky, light-colored ground. The overall tone of the image is soft and slightly hazy, with a warm, golden light that suggests a sunrise or sunset setting. The text is overlaid on this background, centered horizontally.

Protecting Tiehm's buckwheat

Patrick Donnelly

Center for Biological Diversity

July 15, 2020

Nevada DCNR public meeting - Tonopah

Protecting Tiehm's buckwheat

- Today's presentation is informational only, for the community
- Formal presentations and reports will be presented by the Center for Biological Diversity and Dr. Naomi Fraga in advance of the virtual public meeting on July 20th



The Extinction Crisis

- Current extinction rate is 1,000x background level
- Dozens of species going extinct every day
- Up to one million species at risk of extinction
- Sixth mass extinction



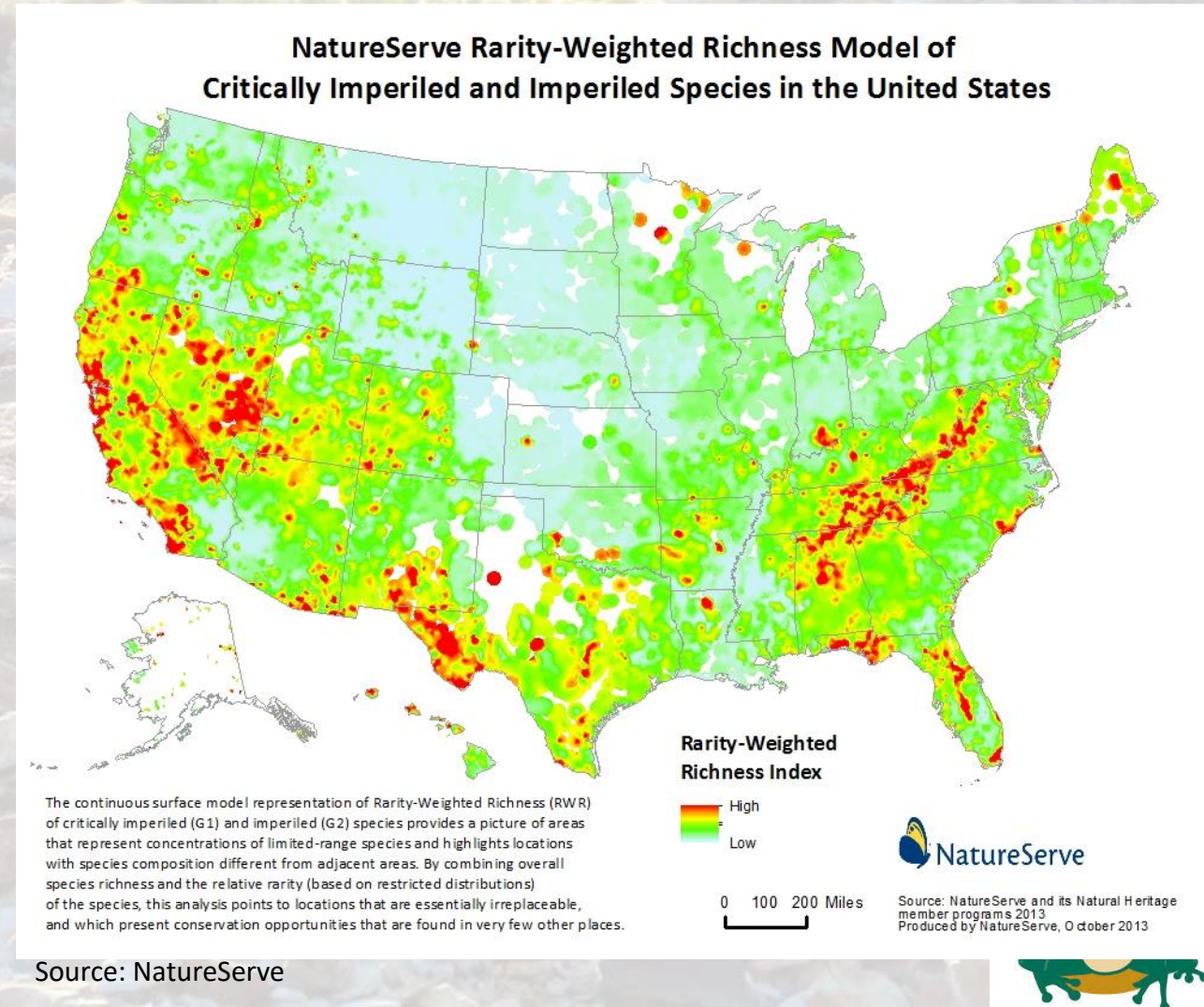
UN News

World is 'on notice' as major UN report shows one million species face extinction



Endemism in Nevada

- Nevada has high levels of endemism due to:
- Extreme aridity
- Isolated water sources
- Unique geological substrates
- Microclimates



Tiehm's Buckwheat (*Eriogonum tiehmii*)

- Identified in 1983, named in 1985
- Lives on 21 acres in western Nevada's Silver Peak Range
- About 6,000' in elevation
- Endemic to highly mineralized channery soils with high boron content
- Between 20,000-40,000 individuals known to exist



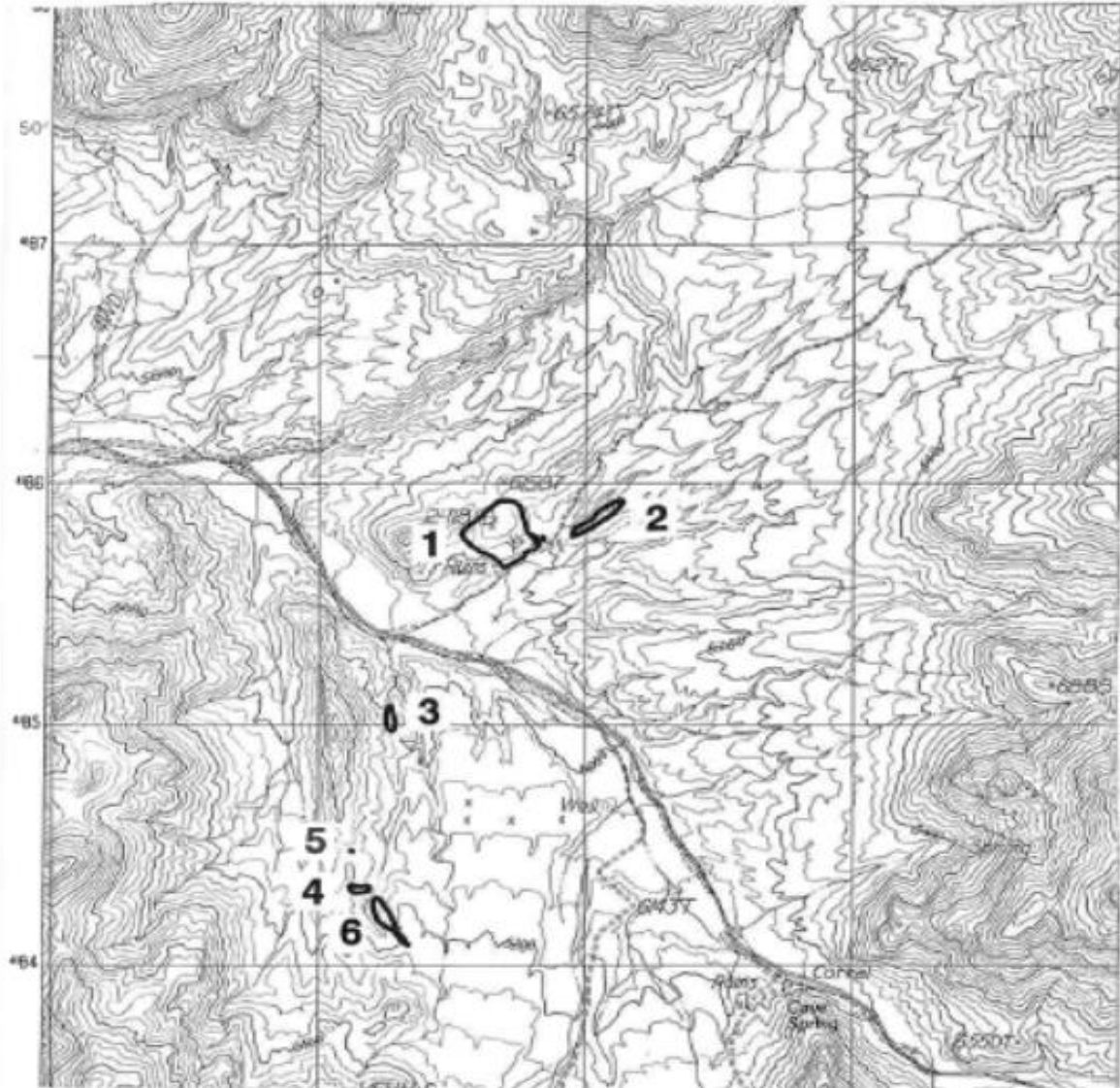
Source: Patrick Donnelly, Center for Biological Diversity



Tiehm's Buckwheat (*Eriogonum tiehmii*)



Source: Politico Magazine



Source: Morefield, 1995



Tiehm's Buckwheat (*Eriogonum tiehmii*)



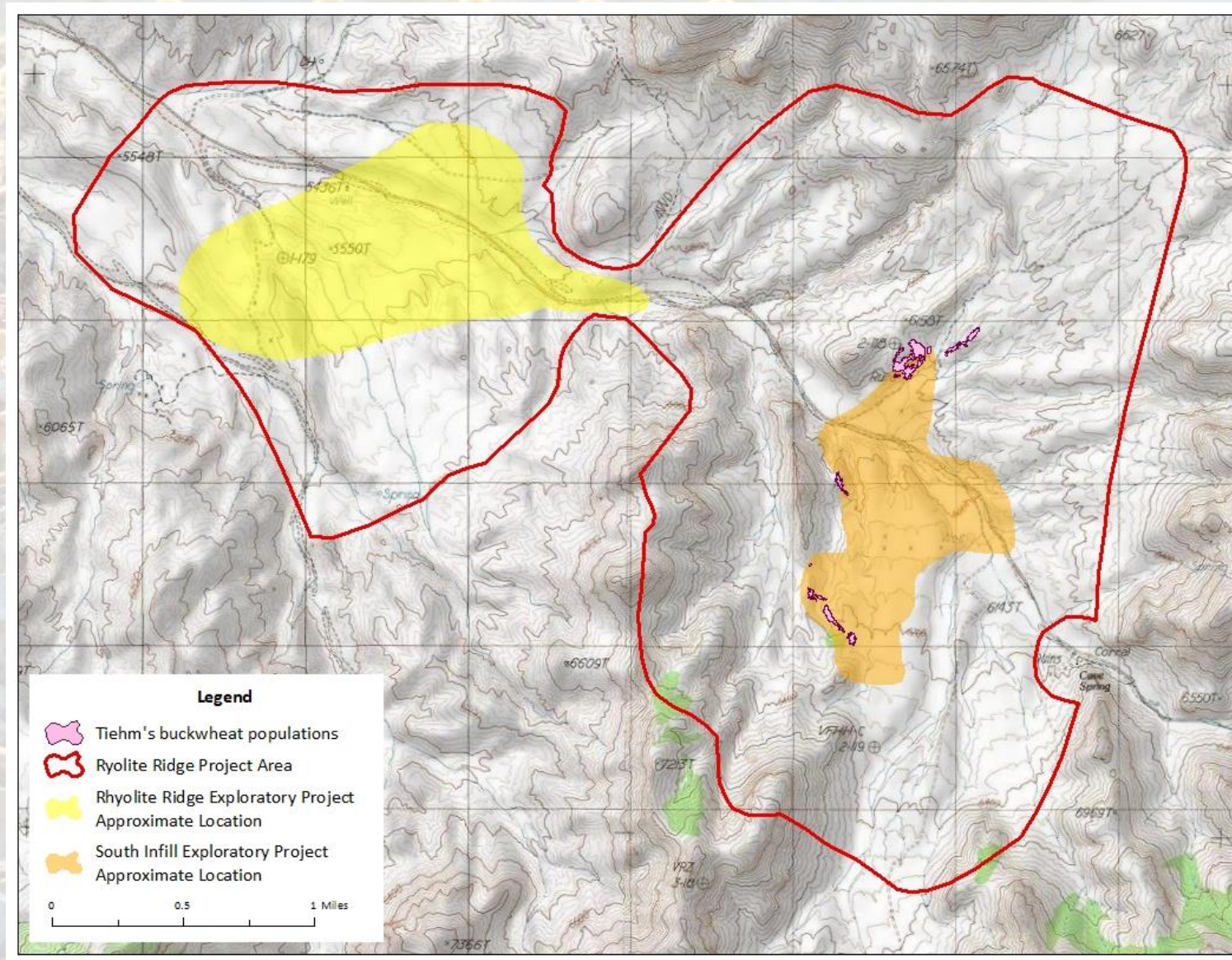
Source: Patrick Donnelly, Center for Biological Diversity



Source: Patrick Donnelly, Center for Biological Diversity



Tiehm's Buckwheat (*Eriogonum tiehmii*)



Source: Kara Clauser, Center for Biological Diversity



Tiehm's Buckwheat (*Eriogonum tiehmii*)

- October 2019: petitioned USFWS for protection under the Endangered Species Act
- November 2019: sued BLM for authorizing mining exploration activities without proper documentation
- January 2020: reached settlement to temporarily halt exploration

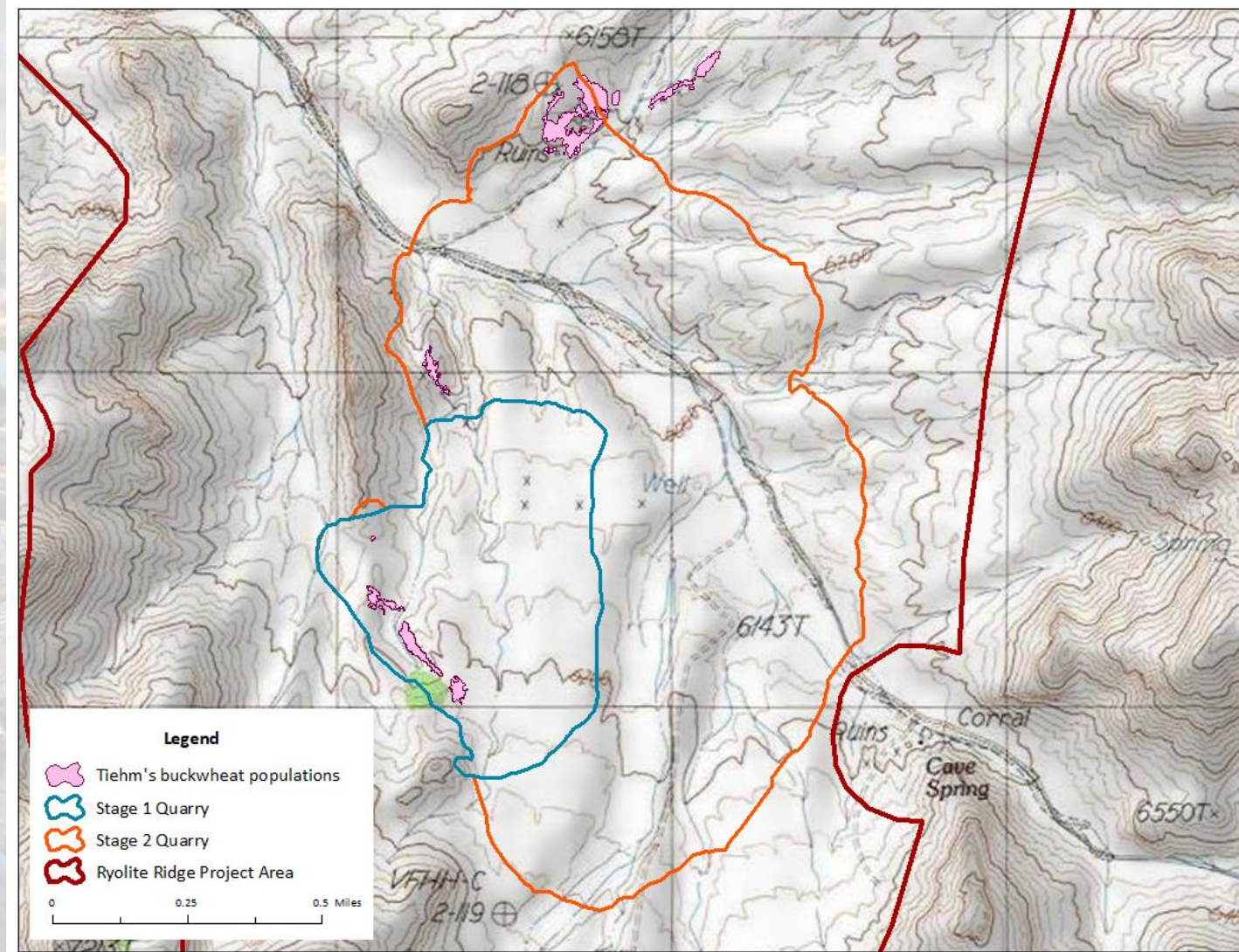


Source: Patrick Donnelly, Center for Biological Diversity



Rhyolite Ridge Mine

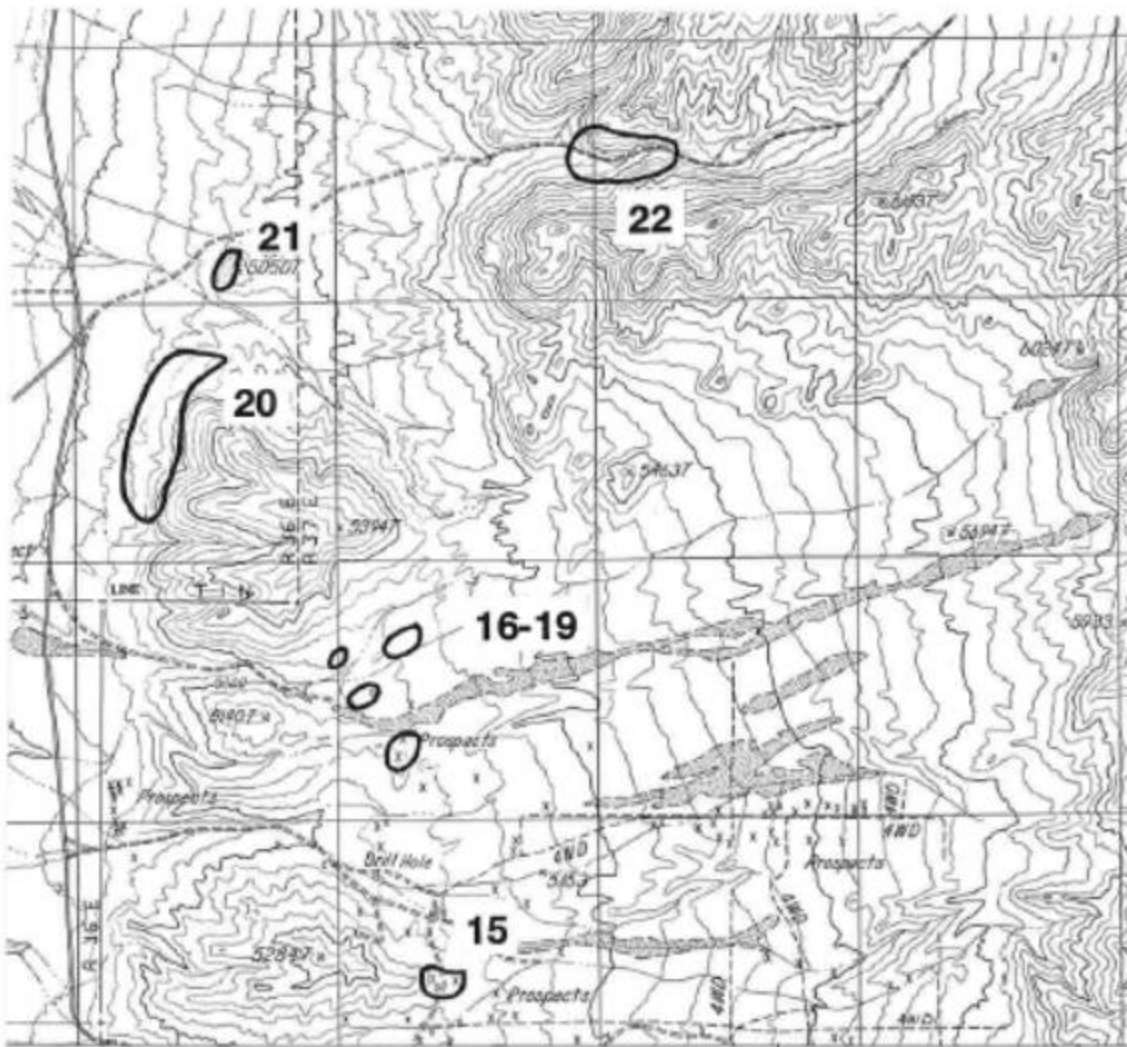
- Phase 1, per Plan of Operations, will wipe out 30% of habitat and 60% of individuals
- Phase 2, per Definitive Feasibility Study, will wipe out >80% of habitat and 90% of individuals



Source: Kara Clauser, Center for Biological Diversity



Where Tiehm's buckwheat ISN'T



Morefield, 1995

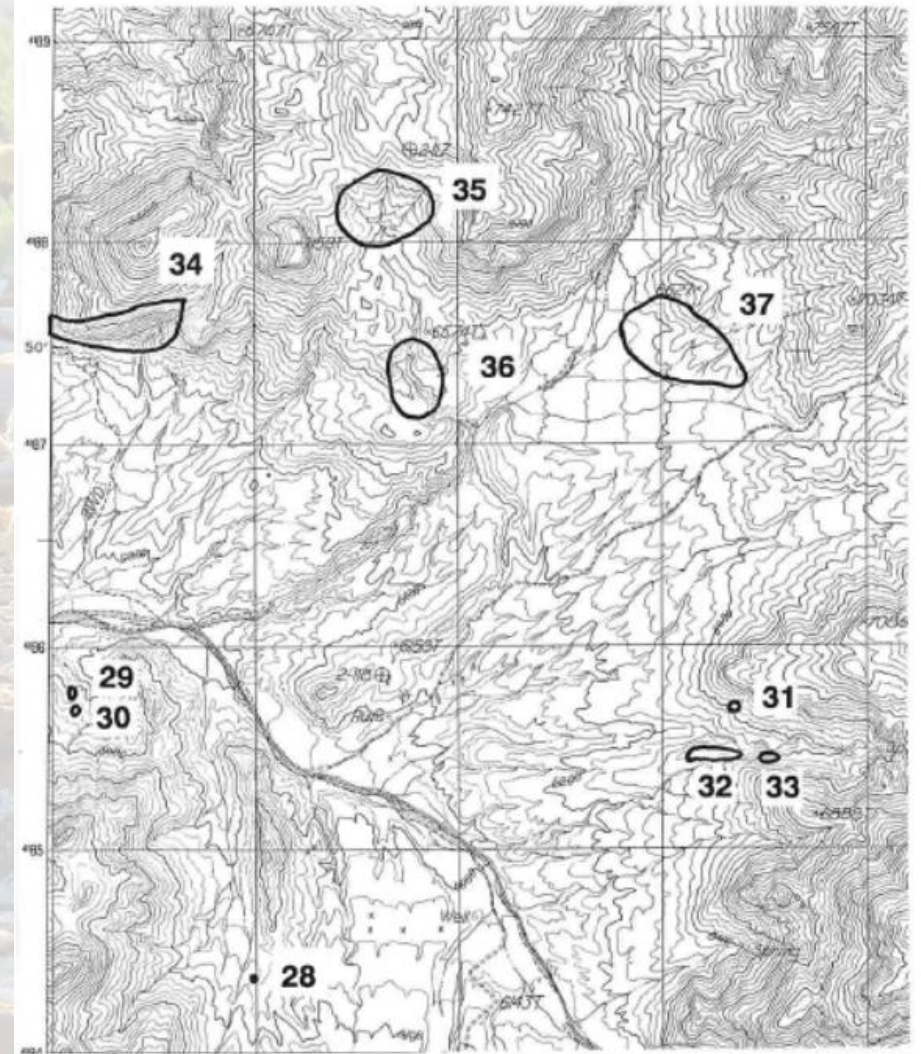


Figure 8. Sites 28-37 searched where no *Eriogonum tiehmii* were found (Rhyolite Ridge, Nevada, 1:24,000 quadrangle).

Morefield, 1995



Tiehm's Buckwheat (*Eriogonum tiehmii*)

AP

Who's greener? Mine fight pits electric cars against flower

By SCOTT SONNER March 7, 2020

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Mining Company Extends UNR Research on Rare Wildflower

A mining company
wildflower that cr

VOICES | Opinion *This piece expresses the views of its author(s), separate from those of this publication.*

Research at UNR will put fragile wildflower at risk | Fraga

Naomi Fraga

Published 8:53 a.m. PT May 16, 2020



Tiehm's Buckwheat (*Eriogonum tiehmii*)



Source: Patrick Donnelly, Center for Biological Diversity



What is a species?

- Is a species more than a set of genetic material?
- Ex-situ preservation
- evolutionarily significant units (ESUs) / Distinct Population Segments (DPSs)
- What is “extinction”?
 - Functional extinction
 - Conservation-dependent species
 - Extinct within natural range
 - Globally extinct
 - DNA?



Thank you

